

In the Claims:

Claims 1 to 20 stand of record in the case.

Claims 1 to 20 stand rejected.

Explanation of Amendments in the Claims:

1.(Cancelled)

2.(Cancelled)

3.(Cancelled)

4.(Cancelled)

5.(Cancelled)

6.(Cancelled)

7.(Cancelled)

8.(Cancelled)

9.(Cancelled)

10.(currently amended)    ~~A tone locating system for a cable installation~~

~~having comprising:~~

~~a backbone cable,~~

~~a plurality of branch cables,~~

~~splices coupling the branch cables to the backbone cable~~

~~and tone conductors along the backbone and branch cables, the tone conductors being connected at the splices,~~

~~the and a cable locating system for locating the backbone cable and the branch cables, the system comprising:~~

~~a tone source connected to the tone conductor of the backbone cable at an inner end of the backbone cable for transmitting a current signal on the tone conductors of the backbone cable and branch cables at a tone frequency;~~

~~a plurality of terminations connected to the respective tone conductors at ends thereof remote from the tone source and the splices, each termination comprising:~~

~~a load impedance connected to between the respective tone conductor and to a tone signal return path for discharge of current from the tone~~

conductor; and

an active component responsive to variations in a voltage in between the respective tone conductor and the return path to vary the magnitude of the load impedance to maintain a maximum amplitude of the current discharged at a substantially constant current through the load impedance value.

11.(currently amended) A system cable installation according to Claim 10 wherein the load impedance includes a load resistor and the active component comprises means for maintaining the voltage across the load resistor substantially constant.

12.(currently amended) A system cable installation according to Claim 11 wherein the active component is a field effect transducer transistor.

13.(currently amended) A system cable installation according to Claim 11 including a rectifier with an input ~~connected between~~ for receiving current from the tone conductor and the return path and an output connected to a series circuit including the load resistor and the source and drain terminals of the field effect transducer the load impedance.

14.(currently amended) A system cable installation according to Claim 43 10 including a high frequency pass filter connected ~~in parallel with the drain and source terminals of the field effect transistor~~ to the tone conductor for filtering frequencies below the tone frequency.

15.(currently amended) A system cable installation according to Claim 14 10 including ~~a voltage limiting component connected across the gate and source terminals of the field effect transistor~~ wherein the active component maintains the amplitude of the current below a predetermined maximum value.

16.(currently amended) A system cable installation according to Claim 43 10 including a mains frequency blocking filter connected to the ~~rectifier input~~ to the tone conductor for filtering mains frequencies.

17.(currently amended) A system cable installation according to Claim 16 including a high pass filter connected to the mains frequency blocking filter.

18.(currently amended) A system cable installation according to Claim 10 including a surge suppresser connected between the tone conductor and the tone signal return path.

19.(Cancelled)

20. (Currently amended) A method comprising:

~~of providing a controlled signal current on each of a~~ backbone cable with inner and outer ends and a signal conductor from the inner end to the outer end;

~~and~~ providing a plurality of branch cables with respective inner and outer ends and with the inner ends spliced to the backbone cable, each of the branch cables having a signal conductor spliced at the inner end of the branch cable to the signal conductor of the backbone cable, ~~the method comprising~~;

applying an electrical signal to the signal conductor at the inner end of the backbone cable, the electrical signal defining an alternating tone current at a tone frequency;

providing resistive terminations at the outer end of the backbone cable and at the outer end of each branch cable,

~~connecting the signal conductor to~~ providing a signal return path;

discharging the tone current at each termination to the signal return path;

~~monitoring the electrical signal at each termination~~;

and maintaining a substantially constant a maximum amplitude of the discharged electrical signal current at each termination ~~by varying the resistive termination in response to variations in the electrical signal at the termination~~.

Add new claims as follows:

21.(new) A cable installation comprising:

a backbone cable;

a plurality of branch cables;  
splices coupling the branch cables to the backbone cable;  
and tone conductors along the backbone and branch cables, the tone conductors being connected at the splices;  
and a cable locating system for locating the backbone cable and the branch cables, the system comprising:  
a tone source connected to the tone conductor of the backbone cable at an inner end of the backbone cable for applying a current signal to the tone conductors of the backbone cable and branch cables defining an alternating tone current at a tone frequency;  
and a plurality of terminations each connected to a respective one of the tone conductors at ends thereof remote from the tone source and the splices;  
each termination defining a load impedance between the respective tone conductor and a tone signal return path for discharge of the current signal from the tone conductor;  
and each termination being arranged to limit an amplitude of the discharged current to a maximum value which is sufficient for cable location, thus ensuring that branches furthest from the tone source have adequate current for location purposes;  
and the terminations being arranged such that the maximum value of the discharged current is the same at each termination.

22.(new) A cable installation according to Claim 21 wherein each termination includes a load resistor and a field effect transistor.

23.(new) A cable installation according to Claim 21 wherein each termination includes a high pass filter connected to the tone conductor for filtering frequencies below the tone frequency.

24.(new) A cable installation according to Claim 21 wherein each

termination includes a mains frequency blocking filter connected to the to the tone conductor for filtering mains frequencies.

25.(new) A cable installation according to Claim 24 wherein each termination includes a high pass filter connected to the mains frequency blocking filter.

26.(new) A cable installation according to Claim 21 wherein each termination includes a surge suppresser connected between the tone conductor and the tone signal return path.

27.(new) A method comprising:  
providing a backbone cable;  
providing a plurality of branch cables;  
providing splices coupling the branch cables to the backbone cable;  
providing tone conductors along the backbone and branch cables, the tone conductors being connected at the splices,

providing a tone source connected to the tone conductor of the backbone cable at an inner end of the backbone cable for applying a current signal to the tone conductors of the backbone cable and branch cables defining an alternating tone current at a tone frequency;

and providing a plurality of terminations each connected to a respective one of the tone conductors at ends thereof remote from the tone source and the splices;

arranging each termination to define a load impedance between the respective tone conductor and a tone signal return path for discharge of the current signal from the tone conductor;

at each termination limiting an amplitude of the discharged current to a maximum value which is sufficient for cable location, thus ensuring that branches furthest from the tone source have adequate current for location purposes;

and arranging the terminations such that the maximum value of the discharged current is the same at each termination.